The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TODD P. BEACH and BRET WAHL

Appeal No. 2000-0486
Application No. 08/853,651

HEARD: March 15, 2001

Before CALVERT, ABRAMS, and GONZALES, Administrative Patent Judges

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1 through 30, which are all of the claims in the application. The appellants have confined the appeal to only claims 23 through 30 (main brief, page 2). Consequently, the appeal as to claims 1 through 22 is hereby dismissed, leaving for review the standing rejection of claims 23 through 30.

We REVERSE.

The appealed claims are directed to a golf club having an iron-type head. A copy of the claims under appeal is set forth in the appendix to the appellants' main brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Meredith et al. (Meredith)	5,018,735	May 28, 1991
Fenton et al. (Fenton)	5,093,162	Mar. 03, 1992
Hogan	5,308,062	May 03, 1994
Teramoto et al. (Teramoto)	5,333,859	Aug. 02, 1994
Allen	5,401,021	Mar. 28, 1995

Claims 23 through 30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Fenton in view of Allen, Meredith, Teramoto and Hogan.

Rather than reiterate the conflicting viewpoints advanced

by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 15) for the examiner's complete reasoning in support of the rejection and to
the main and reply briefs (Paper Nos. 14 and 16, respectively) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Claim 23[1] calls for a golf club comprising an iron-type head and a shaft having the following physical properties: (i) a length between 33 to 40 inches, (ii) a weight less than or equal to 85 grams, (iii) a tip portion outer diameter greater than or equal to .38 inches and less than or equal to .40

[1] Claim 23 is dependent on independent claim 22 and, therefore, is construed to incorporate all the limitations of that claim.

inches, (iv) a tip portion inner diameter greater than or equal to 0.15 inches and (v) a tip portion wall thickness between 0.04 and 0.125 inches. We are informed by the appellants' specification (p. 7) that the combination of tip portion inner diameter and wall thickness and overall shaft length recited in claim 23 results in an iron-type club which is more stable in the event of offset impact.[2] The examiner rejected claim 23, as well as claims 24 through 30 which depend directly or indirectly from claim 23, as being unpatentable over Fenton in view of Allen, Meredith, Teramoto and Hogan. For the reasons which follow, it is our opinion that the combined teachings of Fenton, Allen, Meredith, Teramoto and Hogan are insufficient to establish a prima facie case of obviousness[3] of the subject matter of

[2] We note the teaching in the appellants' specification (p. 9) that a golf club shaft according to the appellants' invention has increased resistance to rotation due to impact of the ball on the face of the club as compared to the prior art. With this in mind, it is apparent that the references on page 9 and in the table on page 10 to curves A-D in Fig. 13 are reversed, e.g., the prior art is shown by curve D not curve A. These errors in the specification are worthy of correction upon return of the application to the jurisdiction of the examiner.

[3] The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Indeed, a prima

claim 23.

Fenton discloses a composite golf club shaft having a length between 41.5 to 43 inches (Figs. 6 and 10), a weight between 77 to 85 grams (col. 6, l. 42) and a tip portion outer diameter between .40 to .44 inches (col. 3, ll. 56-57). The examiner acknowledges that Fenton does not teach or suggest a golf club shaft having a length between 33 to 40 inches, a tip portion

inner diameter greater than or equal to 0.15 inches or a tip portion wall thickness between 0.04 and 0.125 inches as called for in claim 23. See answer, p. 8.

To overcome the above-noted deficiencies of Fenton, the examiner relies upon the teachings of Teramoto and Hogan. Teramoto teaches a set of irons having a club length between 35 and 40 inches. See embodiment #1, col. 4, ll. 39-50. Hogan is directed to a golf club shaft having a central shaft portion of greater flexibility than both the butt and tip

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facie case of obviousness is established where the reference teachings would appear to be sufficient for one of ordinary skill in the art having those teachings before him to make the proposed combination or modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

portions and with the wall thickness at a maximum at the tip portion (see col. 1, l. 62 through col. 2, l. 18). Hogan obtains the desired shaft flexibility in the central zone by appropriate selection of the number of fiber layers and the winding direction of the fibers on the molding mandrel (see col. 3, l. 65 through col. 4, l. 9). Hogan describes a preferred embodiment of the golf club as having an overall length of 51 inches, a weight of 115 to 132 grams, a tip portion wall thickness of 2.94 mm (0.116 inches) and an inner diameter of 0.139 inches.[4] See col. 4, ll. 32-57. Hogan does not teach a tip portion inner diameter greater than or equal to 0.15 inches. However, the examiner asserts that "an artisan skilled in the art in designing a club with a specific flexional rigidity would have selected a suitable wall thickness in which a wall thickness [sic: inner diameter] being greater than or equal to 0.15 inches is included" (answer, p. 8) and "that motivation to do so is found in the

[4] Specifically, at column 4, lines 32-41, Hogan teaches a golf club shaft having an outer diameter and a wall thickness at the tip end of 9.4 mm and 2.94 mm, respectively. Given those dimensions, the tip portion inner diameter can be calculated to be 3.52 mm (approximately 0.139 inches).

knowledge generally available to one of ordinary skill in the art which is to achieve a specific flexibility in a tip portion for a specific player" (answer, p. 13). In addition, the examiner finds no criticality in the claimed tip portion inner diameter and wall thickness. Id.

It is elementary that to support an obviousness rejection, all of the claim limitations must be taught or suggested by the prior art applied. See In re Royka, 490 F.2d 981, 984-85, 180 USPQ 580, 582-83 (CCPA 1974)). Further, in establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in

the art and not from the appellants' disclosure. See, e.g., Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

In our view, the combined teachings of Fenton, Teramoto and Hogan would not have led an artisan to arrive at the claimed invention. In that regard, it is our opinion that the combination of an iron-type head and a shaft having a length between 33 to 40 inches, a weight less than or equal to 85 grams, a tip portion outer diameter greater than or equal to .38 inches and less than or equal to .40 inches, a tip portion inner diameter greater than or equal to 0.15 inches and a tip portion wall thickness between 0.04 and 0.125 inches is not suggested by the applied prior art. Specifically, we see no motivation, suggestion or teaching in Hogan of the desirability of making the tip portion wall thickness of the Fenton shaft 2.94 mm (0.116 inches), particularly in view of the fact that the shaft in Hogan is substantially longer and heavier than the shaft disclosed in

Fenton. Additionally, we believe it was inappropriate in this instance for the examiner to have determined that the limitation that the tip portion inner diameter is greater than or equal to 0.15 inches would have been obvious without any evidence providing some motivation, suggestion or teaching of the desirability of making that change to Fenton.

In our view, the only suggestion for modifying Fenton to arrive at the claimed invention in the manner proposed by the examiner stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

We are aware that in rejecting claim 23, the examiner also cites Allen for a teaching of a six iron having a face area of 4165 mm^2 (answer, p. 9) and Meredith for a teaching of "adjusting the flexibility of a shaft near a tip end in order to locate a kick point of a shaft closer or farther away from

a tip end of a shaft to obtain a proper trajectory for a specific player" (answer, p. 7). The examiner has not explained the relevancy of

Allen or Meredith to the golf club defined by claim 23. Our own review of these references reveals that they do not overcome the deficiencies of the Fenton-Teramoto-Hogan combination articulated above.

For the reasons set forth above, the decision of the examiner to reject claim 23, and claims 24 through 30 dependent thereon, under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 23 through 30 under 35 U.S.C. § 103(a) is reversed.

REVERSED

IAN A. CALVERT)
Administrative Patent Judge)
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) BOARD OF PATENT

NEAL E. ABRAMS Administrative Patent Judge	)	APPEALS AND INTERFERENCES
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